PARCC Assessment Administration & Technology Guidance



Agenda

Welcome	Cody Decker
PARCC Assessments	Melody Morgan
PARCC Planning Tool	Melody Morgan
Technology Readiness Tool (TRT)	Sarah Cox
Technology Guidance	Holly Glover
Questions & Contact Information	All



Webinar Focus

- The design of PARCC's English Language Arts/Literacy and Mathematics summative assessments
- The number of testing sessions and approximate testing time
- The number of days over which schools may administer the assessments (testing window)
- A general "rule of thumb" guidance for the number of computer devices needed to administer the assessments
- A new tool designed to assist local policy makers and educators build the technology capacity they need to administer PARCC's computer-based assessments in 2014-15

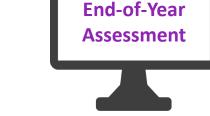


PARCC Assessment Design

Summative Assessments







- After 75 percent of the school year
- Extended tasks, applications of concepts and skills
 - ELA/Literacy: Writing effectively when analyzing text, research simulation
 - Math: Solving multi-step problems requiring abstract reasoning, precision, perseverance and strategic use of tools
 - ELA/Literacy Grades 3-11
 - Math Grades 3-8, Algebra I, Geometry, and Algebra II

- After 90 percent of the school year
- Innovative, short-answer items
 - **ELA/Literacy:** Reading comprehension
 - Math: Short items that address both concepts and skills
 - ELA/Literacy Grades 3-11
 - Math Grades 3-8, Algebra I, Geometry, and Algebra II



4

Number of Testing Sessions

Summative Assessments



Three (3) Sessions ELA /Literacy

Two (2) Mathematics Sessions

Two (2) Sessions ELA /Literacy

+
Two (2) Mathematics Sessions



Estimated Time on Task by Grade and Session

				Perform	nance-Based	Compon	ent	
		ELA/Literacy			Ma	ath		
	Crada		Literary	Research	Narrative	Session	Session	Total
	Grade		Analysis	Research	warrative	1	2	
		Estimated						
١	3	Time on Task	50	60	40	50	50	250
l		(minutes)						

End-of-Year Component					
ELA/Li	teracy	Ma			
Session	Session	Session	Session	Total	
1	2	1	2		
60	60	55	55	230	

Summative Total	
8 hours	

			Performance-Based Component				
	_		ELA/Literac	у	M	ath	
Grades		Literary Analysis	Research	Narrative	Session 1	Session 2	Total
4-5	Estimated Time on Task (minutes)	80	80	50	50	50	310

End-of-Year Component					
ELA/Li	teracy	Ma	ath		
Session 1	Session	Session 1	Session	Total	
70	70	55	55	250	

Summative Total	
9 hours, 20 minutes	

				Perforn	nance-Based	Compon	ent	
				ELA/Literac	у	Ma	ath	
G	irades		Literary Analysis	Research	Narrative	Session 1	Session 2	Total
	6-8	Estimated Time on Task (minutes)	80	85	50	50	50	315

	End-of-\	ear Comp	onent	
ELA/Li	teracy	Ma	ath	
Session	Session	Session	Session	Total
1	2	1	2	
70	70	55	55	250





Note: Estimated time on task refers to an estimate of the amount of time the typical student will need to complete each session. While it is anticipated that most students will complete the test sessions within these estimated times, all participating students will have a set amount of additional time for each session to provide them with ample time to demonstrate their knowledge.

Estimated Time on Task by Grade and Session

				Perform	nance-Based	Compon	ent	
				ELA/Literac	у	Ma	ath	
G	irades		Literary Analysis	Research	Narrative	Session 1	Session 2	Total
N (9 -10 Alg I/ Math I Geo/ Math II	Estimated Time on Task (minutes)	80	85	50	50	50	315

	End-of-Y	ear Comp	onent	
ELA/Li	teracy	Ma	ath	
Session	Session	Session	Session	Total
1	2	1	2	
70	70	65	65	270

Summative Total
9 hours, 45 minutes

			Perform	nance-Based	Compon	ent	
			ELA/Literac	у	Ma	ath	
Grade		Literary Analysis	Research	Narrative	Session 1	Session 2	Total
11 Alg II / Math III	Estimated Time on Task (minutes)	80	85	50	65	65	345

End-of-Year Component									
ELA/Li	teracy	Ma	ath						
Session	Session	Session	Session	Total					
1	2	1	2						
70	70	55	55	250					

Summative Total 9 hours, 55 minutes



Note: Estimated time on task refers to an estimate of the amount of time the typical student will need to complete each session. While it is anticipated that most students will complete the test sessions within these estimated times, all participating students will have a set amount of additional time for each session to provide them with ample time to demonstrate their knowledge.

Testing Window

- Each 20 day window is provided primarily to plan ample opportunity to administer the assessments via computer in schools with:
 - Limited number of devices
 - Limited bandwidth
- Schools will have a maximum of 20 days to administer <u>each</u> assessment component:
 - Performance Based Assessment (PBA) component
 - End of Year Assessment (EOY) component
- Schools could complete administration of the tests in fewer days <u>if</u> they have sufficient capacity to administer assessments to large numbers of students simultaneously



Device Guidance & Planning

- The overarching goal is to serve and support
 - High quality student instruction
 - Teacher professional development
 - School community communications and
 - Next Generation Assessments
- PARCC Minimum and Recommended Technology Guidelines:

http://www.parcconline/technology



Device Guidance & Planning

The number of devices a school needs for assessment is largely dependent on:

- 1) The number of students enrolled at each tested grade level;
- 2) The number of students that can be tested simultaneously given the way in which available devices are deployed (e.g. in labs, in classrooms, on carts, etc.); and
- 3) The available bandwidth capacity



"Rule of Thumb" Guidance

School type	Minimum number of devices	Recommended number of devices
For a school with three tested grades (K-5, 6-8, 9-12)	One device for every two students in the largest tested grade	One device per student for the largest tested grade
For a school with six tested grades (K-8)	One device per student for the largest tested grade	One device per student for the two largest tested grades

- These are general assessment planning guidelines. Districts may wish to recommend lower student to device ratios to ensure that schools can continue with computer-based instruction at the same time as they are conducting computer-based assessments.
- The expectation is that all students will take the PARCC assessments online.
- The PARCC assessments will be available in paper and pencil format for students with disabilities who have an Individualized Education Plans which requires this accommodation.



- The Assessment Administration Capacity Planning tool is simply an electronic spreadsheet that allows schools to evaluate the extent to which their *current* computer inventory and bandwidth is sufficient to administer PARCC's computer-based assessments, as well as model what they could do with increased capacity
- The tool and accompanying users' guide can be found: http://www.parcconline.org/assessment-administration-guidance



The following **school-level** information will need to be entered in the Planning Tool:

- 1) The number of students in each tested grade:
- The number of computers available for testing that meet PARCC's minimum technology specifications;*
- 3) Bandwidth availability;
- 4) Estimates for instructional and office uses of bandwidth that will be taking place during assessment sessions; and
- 5) The number of assessment administration days to use as a target for the calculated models.
 - * Data derived from the Technology Readiness Tool that meet minimum technology specifications.



- Assumptions Used by the Tool:
 - Each individual student will not take more than one session per day
 - The default minimum testing window is 5 schools days for the Performance Based Assessment (PBA) components and 5 school days for the End of Year Assessment (EOY) components
 - The tool uses bandwidth levels that are at the high end of industry averages for technology and media rich online assessments a maximum bandwidth demand of 100 kbps for online administration where students maintain an active connection to the Internet throughout the test and 30 kbps for administration of tests using caching approaches (browser or proctor caching) that have much lower per student bandwidth demands
 - The final bandwidth requirements for PARCC assessments have not yet been determined, and are dependent of PARCC's development of next generation assessment items and the technology platform to deliver them. PARCC anticipates the release of final bandwidth requirements by October 2013.





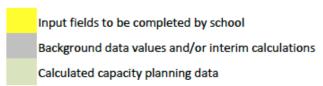
SMALL ELEMENTARY SCHOOL EXAMPLE

Partnership for Assessment of Readiness for College and Careers (PARCC)

Assessment Capacity Planning Tool

Release Version 1: March 5, 2013

This tool is continually being updated and improved. Please visit http://www.parcconline.org/assessment-administration-guidance for the most current versions of the Capacity Planning Tool and related information



PLEASE NOTE: This document is for planning purposes only, to provide estimated values of high level assessment capacity calculations. The estimated specifications and other assumptions used in this tool are subject to change.

Please refer to the Assumptions Tab and the Users' Guide to the Assessment Administration Capacity Planning Tool for more information and assistance in using and interpreting the Planning Tool.



ENTER YOUR SCHOOL DATA STUDENTS Enter Student Population Estimates for the 2014-2015 School Year: Grade Total population 3 122 4 118 5 120 6 124 7 8 9 10 11 TOTAL TOTAL

Enter the number of computer devices available for assessment that meet

PARCC Minimum Technology Specifications:

(For assistance in calculating eligible devices, please use the separate PARCC-SBAC Technology Readiness
Tool and PARCC Technology Guidelines)

Devices available for assessment	t that meet PARCC minimu By Location	ım specifications-
Computers that can be used simultaneously in classrooms or are on computer carts	36	
Computers that can be used simultaneously in computer labs	15	
TOTAL	51	



Enter your preferred number of administration days to be used in calculating planning models (PARCC maximum = 20 days, PARCC minimum = 5 days. States or districts may set different requirements.) Enter your preferred number of administration days Run calculations using the PARCC estimate of a 20-day maximum Use a different number of administration days (for example, states or districts may establish different requirements) 20 Enter information about the school's average connection speed to the Internet (total kbps as reported by your Internet Service Provider or district technology office): (PARCC encourages schools to run a trusted speed test tool to generate this estimate. More information is provided in the Capacity Planning Tool Users' Guide. Alternately, schools my use as an estimate the connectivity as reported by your Internet Service Provider or district technology office): Internal Connection Speed External Connection (kbps) Speed (kbps) 100000 100000



Type of Use	Number of simultaneous users (students, teachers, administrators) engaged in activity	Average bandwidth demand in Kbps (for reference)	Bandwidth In Use
Email	5	500	
Web Browsing		500	0
Online Learning (not interactive)		250	0
Online Learning (interactive/single player)		1000	0
Audio Streaming		100	0
Student Content Creation	90	150	13500
Accessing School/District Portal	5	250	1250
Video Streaming (standard quality)		700	0
Video Streaming (high-definition)		4000	0
Video Conferencing (standard quality)		1000	0
Video Conferencing (high-definition)		4000	0
VoIP		500	0
		TOTAL	17250

Note: Average bandwidth demands of common school technology activities derived from those used by the State Educational Technology Directors Association in their 2012 report The Broadband Imperative, as well as SETDA's original source -- the School 2.0 Bandwidth Calculator (http://etoolkit.org/etoolkit/bandwidth_calculator).



Calculations are based on the school population and the assessment design, using an estimate of 2 testing blocks per day. PARCC RULE OF THUMB: At the largest grade level: 2 stolers per device based on data entaned by the school (Recommended for schools with the stolers per device based (or all testing) (Recommended for schools with the stolers per device based (or all testing) (Recommended for schools with the stolers per device (Recommended for schools with the stolers per device (See of O' Year Based Assessment Assessment Assessment Assessment Assessment Oursions Oursions California Convious Needed for this Violet Assessment Assessme	VICE TO STUDENT RATIO	MODELS								
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Continued of the school Continued of the						PARCC RUI	LE OF THUMB:			
Performance End Of Year Assessment End Of Year End										
Devices Device										
Derivines Deri					Based				Based	End Of Year
New Additional Devices S2 S3 S5 S5 S5 S5 S5 S5 S5	Devices		30	50	B	a second	4	4	:	Allergreen
Reported Available 53 53 55 55 55 55 55 5		Needed for This			60			124	484	
Needed to March Target Ratio			53	53						
Need (Administrated Online): Bandwidth		Needed to Meet					29	29	433	
Need (Administered with Caching): Bandwidth per Text	Bandwidth	Need (Administered Online): Bundwidth per Yest Block at Target Device		5100	6200	6200	12400	53400	48400	484
Bandwidth par Text Stock (in light) 82750		Need (Administered with Caching): Bandwidth per Test Block at Tanget Devic		55.90	5.860	5860	3720	3720	54520	545
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					PARCC RUL	E OF THUMB:		
		Students per devi entered by		At the largest 2 students		At the largest 1 student p		1 Stude
				(Recommended	for schools with	(Recommended for	schools with more	
				one, two, or thre	e tested grades)	than three teste	ed grade levels)	
		Performance- Based Assessment	End Of Year Assessment	Performance- Based Assessment	End Of Year Assessment	Performance-Based Assessment	End Of Year Assessment	Perform Bas Assess
Devices	Students per device for all tested grades	10	10	8	8	4	4	
	Estimated Devices Needed for This Model			62	62	124	124	
	Reported Available	51	51	51	51		51	
	Additional Devices Needed to Meet Target Ratio			11	11	73	73	
Bandwidth	Maximum Estimated Need (Administered							
	Online): Bandwidth per Test Block at Target Device							
	Capacity (in kbps)	5100	5100	6200	6200	12400	12400	



ADMINISTRATION DAY MODELS

Calculations are based on the school population and the assessment design, using an estimate of 2 testing blocks per day.

			20 Days	20 Days	15 Days	15 Days	10 Days	10 Days	5 Days	5 Days
			Performance- Based Assessment	End Of Year Assessment	Performance- Based Assessment	End Of Year Assessment	Performance- Based Assessment	End Of Year Assessment	Performance- Based Assessment	End Of Year Assessment
	Devices	Minimum number of	based Assessment	Assessment	Assessment	Assessment	baseu Assessment	Assessment	Assessment	Assessment
		devices need to support the target number of								
		administration days	61	49	81	65	121	97	242	194
		Reported Available	51	51	51	51	51	51	51	51
		Additional devices needed to meet the target number of								
		administration days	10	No Gap	30	14	70	46	191	143
	Bandwidth	Maximum Estimated Need (Administered Online): Bandwidth								
		per Test Block at Target Device Capacity (in kbps)	6100	4900	8100	6500	12100	9700	24200	19400
		Minimum Estimated Need (Administered with Caching): Bandwidth per Test Block at Target Device Capacity (in kbps)	1830	1470	2430	1950	3630	2910	7260	5820
		Current Availability: Bandwidth per Test Block (in kpbs)	82750	82750	82750	82750	82750	82750	82750	82750
		Additional Bandwidth Needed to Meet Target Device Capacity (Administered Online)	No Gap	No Gap	No Gap	No Gap	No Gap	No Gap	No Gap	No Gap
		Additional Bandwidth Needed to Meet Target Device Capacity (Administered Using Caching)	No Gap	No Gap	No Gap	No Gap	No Gap	No Gap	No Gap	No Gap
→ → 	Assumptions 🔒 📗 S	mall Elementary	Example 🖺 📗	Large High Sc	hool Example					
al View	Ready	,						Sum=122		▼



Review

- What are the PARCC summative assessment timelines?
- Which grades and subjects will be tested with computerbased PARCC assessments?
- What will PARCC test administration look like?
- Will my current technology be adequate to administer the test?
- How many devices will be needed to assess my students?
- How do I determine if I have gaps in device inventory to administer the PARCC assessment?
- How much bandwidth is recommended for the PARCC assessments?



Contact Information

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TechReadinessTool

https://www.techreadiness.net



Overview

The Technology Readiness Tool is a web-based application designed to:

- (a) help schools and districts identify their current technology infrastructure and
- (b) assist the states and consortia in determining what next steps will best prepare schools and districts for a successful transition to online testing.

The Technology Readiness Tool assesses current capacity and compares that to the technology that will be needed to administer the new online assessments in four areas:

- 1. Computers & other devices
- 2. Ratio of devices to test-takers
- 3. Network and infrastructure
- 4. Personnel (staffing & training)

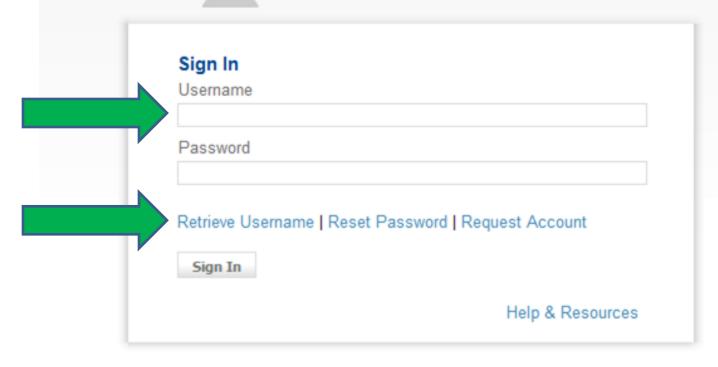


Accessing the Tool

https://www.techreadiness.net



TechReadinessTool







Partnership for Assessment of Readiness for College and Careers









Support Information

On-page Help (question mark icon located in upper right corner of screen)

District Admin Quick Start Guide - Added 05/28/12

District / School Quick Start Guide - Added 05/28/12

Home

Setup ▼

Results & Indicators

Notifications

Posted 02/14/13

- . The following enhancements have been made to the Technology Readiness Tool:
 - Implemented State Wide export feature of School Detail for Device Indicator, Device to Test-Taker Indicator and Network Indicator Reports
 - Added Understanding & Interpreting Reports Guide
 - · Updated User's Guide
 - · Updated Training Modules
 - · Updated Device and School Survey file layouts

Posted 01/14/13

- . Next anticipated snapshot of data will be taken on Friday, 02/15/13. Please continue to make updates as appropriate.
- . The following enhancements have been made to the Technology Readiness Tool:
 - Improved Home Page layout
 - . New Setup Menu structure, separating School Readiness Survey Questions and Mark Data Entry Complete from Organization Management
 - . Updated Device file layout, including additional options for Operating System and Memory
 - . Modified Network Indicator Report, which better represents network readiness
 - · New School Exception Report, allowing users to easily identify data anomalies
 - . Updated User's Guide and training modules to provide guidance for the enhancements listed above

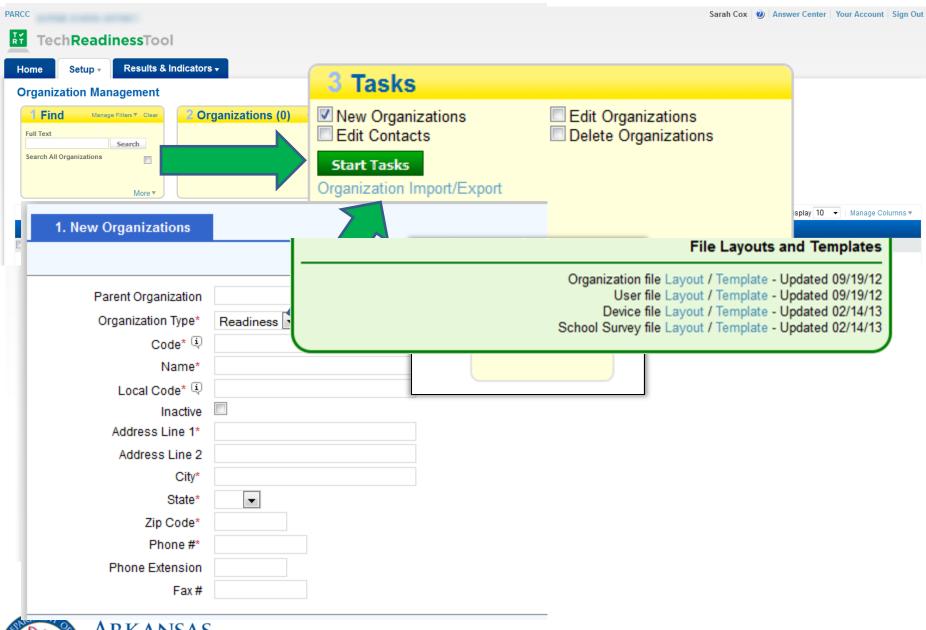
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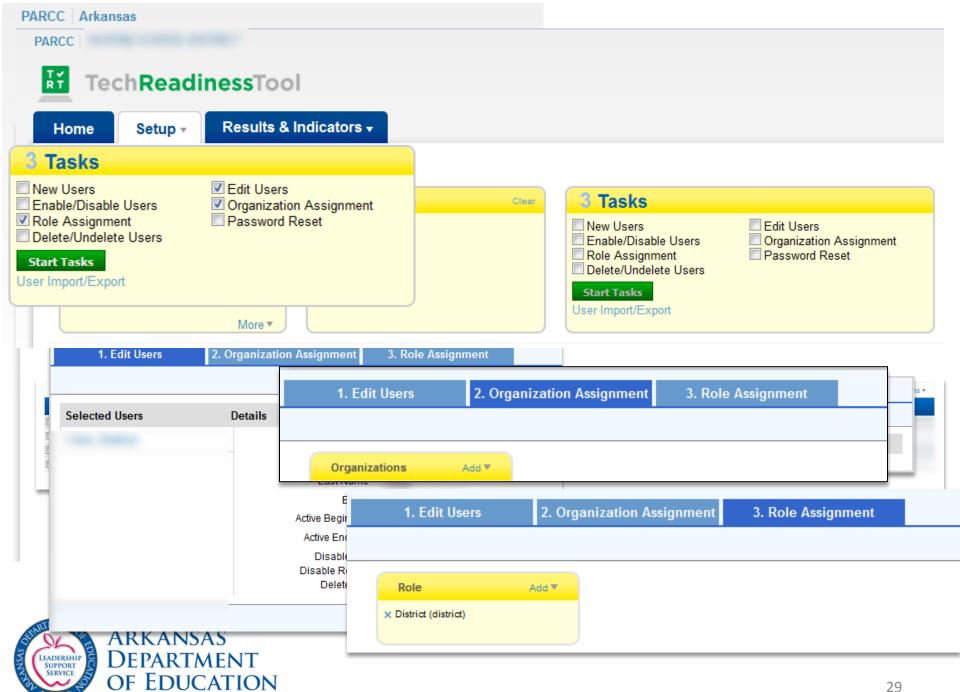
File Layouts and Templates

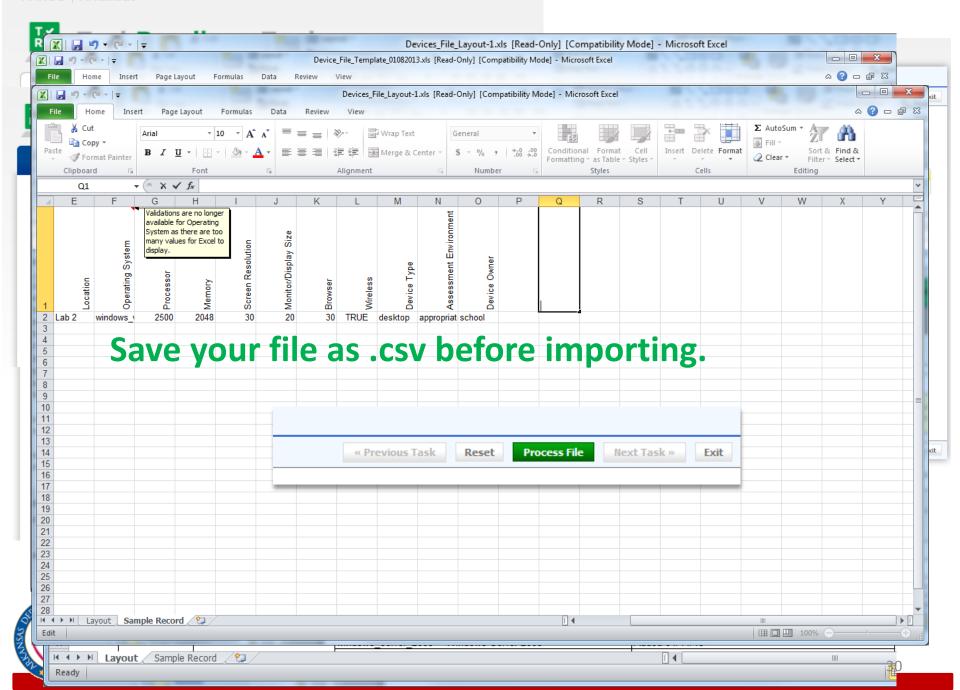
ganization file Layout / Template - Updated 09/19/12 User file Layout / Template - Updated 09/19/12 Device file Layout / Template - Updated 02/14/13 pol Survey file Layout / Template - Updated 02/14/13

) for your specific state.

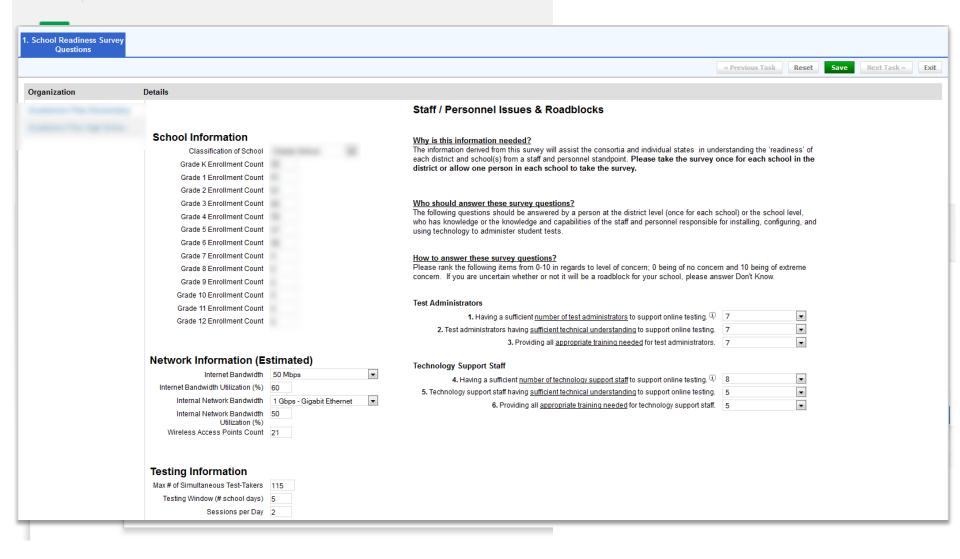




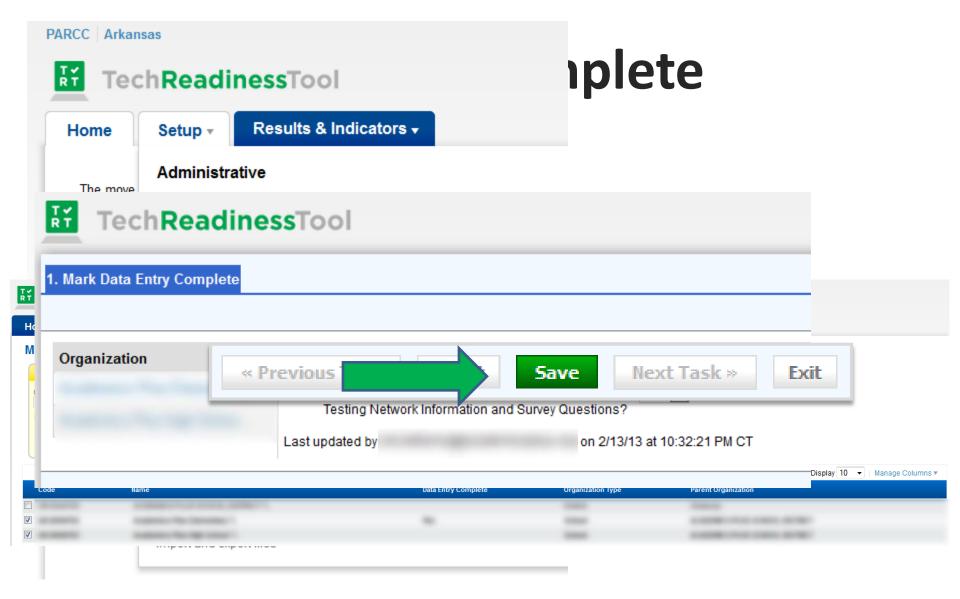




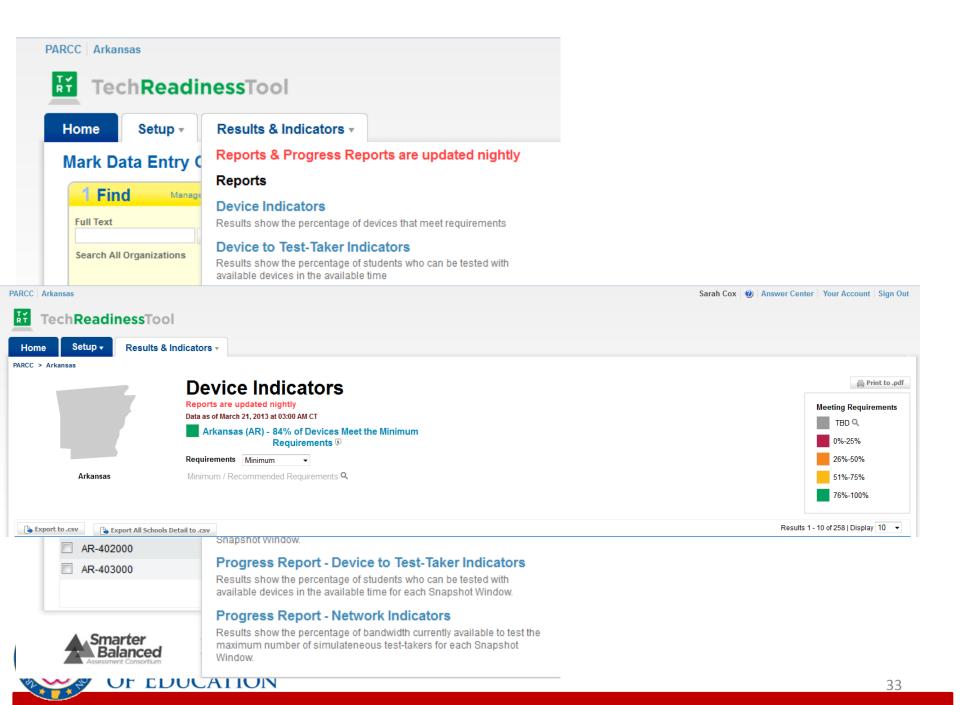
PARCC Arkansas



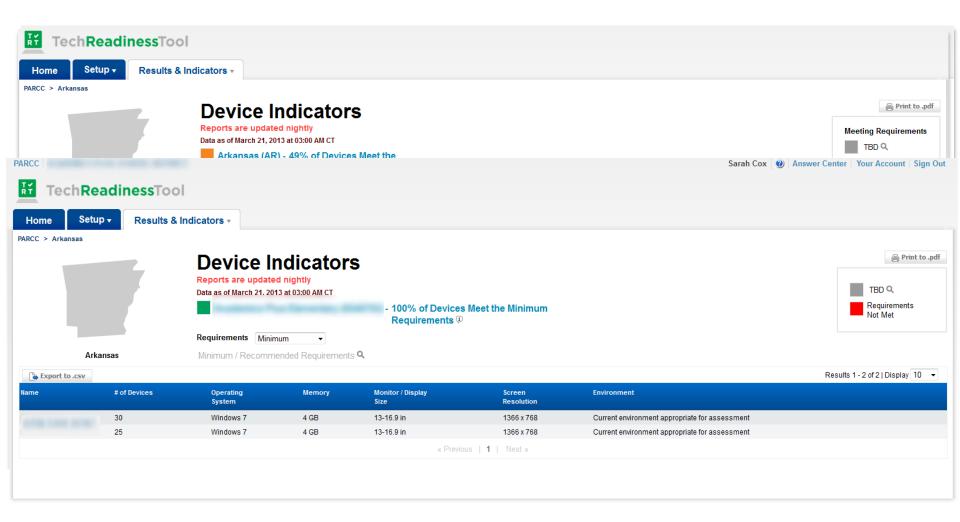






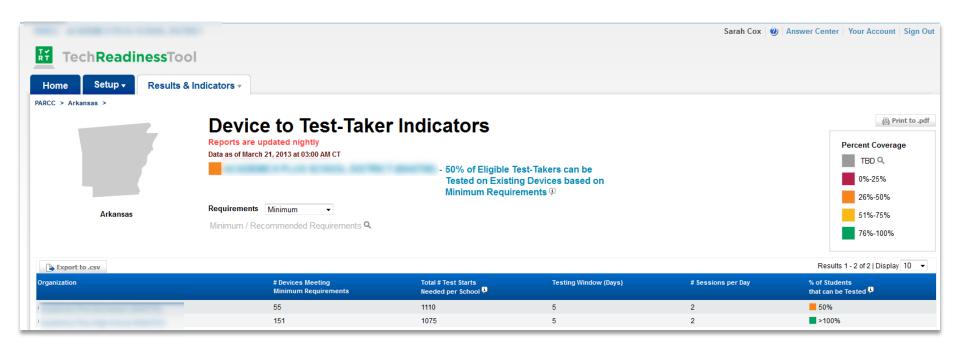


Device Indicators



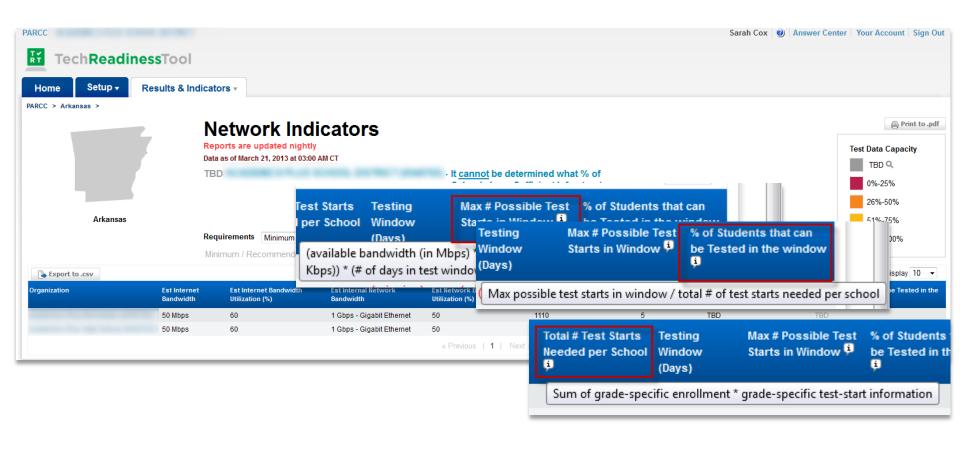


Device to Test-Taker Indicators



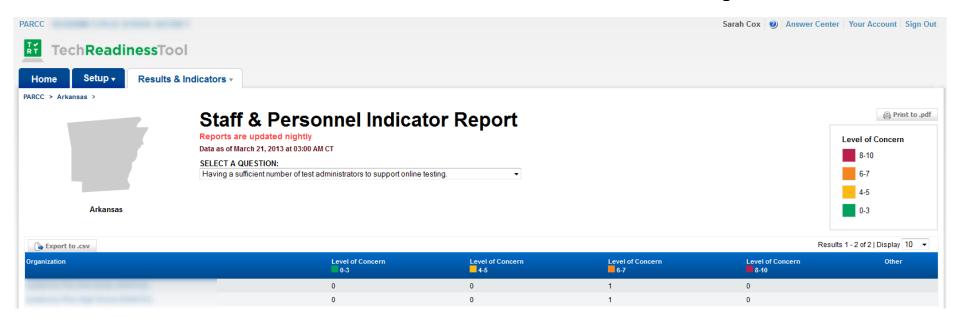


Network Indicators



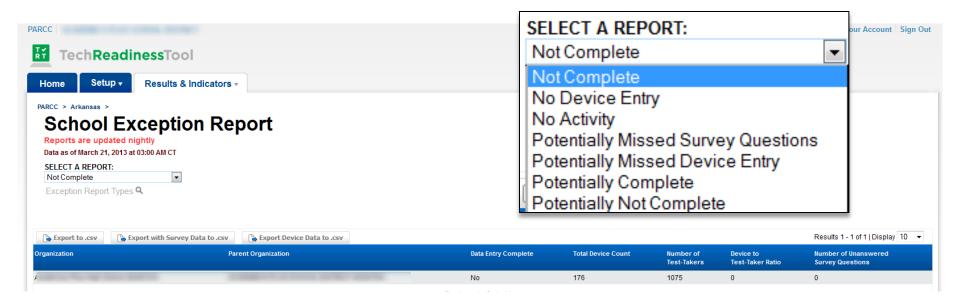


Staff & Personnel Indicator Report



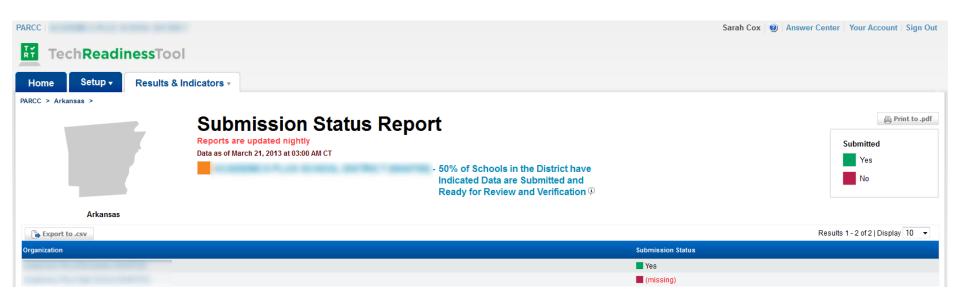


School Exception Report





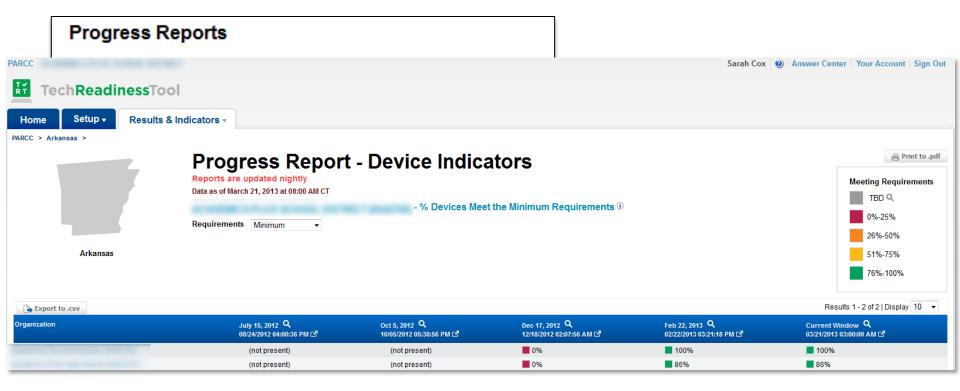
Submission Status Report





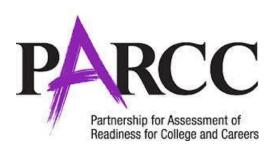
Progress Reports

Provide a point-in-time view of results for each snapshot window.





PARCC Technology Guidance





Minimum/Recommended Specifications

- Minimum Specifications Computers meeting these guidelines can be considered as satisfying PARCC guidelines for 2014-2015 school year.
- Recommended Specifications Computers meeting these guidelines can be expected to satisfy PARCC guidelines through the 2018-2019 school year.



Bandwidth Recommendations

Minimum bandwidth requirements will be determined based on the final specifications of the PARCC assessment delivery platform and the level of multimedia and technology enhanced items in the final assessment design. PARCC will provide minimum specifications by October 2013.

	Minimum Specifications	Recommended Specifications
External Connection to the Internet	To be determined by October 2013	100 kbps per student or faster
Internal School Network	To be determined by October 2013	1000 kbps per student or faster



Device Specifications

Desktops, laptops, netbooks (Windows, Mac, Chrome, Linux), thin client, and tablets (iPad, Windows, and Android) will be compatible devices provided they meet the established hardware, operating system, and networking specifications—and are able to meet the security requirements.



Desktop, Laptop, Netbook and Thin Client Specifications

Operating System	Minimum Specifications ²	Recommended Specifications	
Windows	3.4Windows XP – Service Pack 3	Windows 7 or newer	
Mac OS	Mac OS 10.5	Mac OS 10.7 or newer	
Linux	Ubuntu 9-10, Fedora 6	Linux: Ubuntu 11.10, Fedora 16 or newer	
Chrome OS	Chrome OS 19	Chrome OS 19 or newer	
Memory	512 MB of RAM	1 GB RAM or greater	
Connectivity	Computers must be able to connect to the Internet via wired or wireless networks.	Computers must be able to connect to the Internet via wired or wireless networks.	
Screen Size	9.5 inch screen size or larger	9.5 inch screen size or larger	
Screen Resolution	1024 x 768 resolution ⁵ or better	1024 x 768 resolution ⁵ or better	
Input Device Requirements	Keyboard Mouse or Touchpad or Touchscreen	Keyboard Mouse or Touchpad or Touchscreen	
	The input device must allow students to select/deselect, drag, and highlight text, objects, and areas. The input device must allow students to enter letters, numbers, and symbols and shift, tab, return, delete, and backspace. To meet security guidelines, each Bluetooth/wireless keyboard must be configured to pair with only a single computer during assessment administration. Other assistive technologies may be needed for students requiring accommodations. PARCC will release Accessibility Guidelines and Accommodations Guidelines in June 2013.		
Headphone/Earphone	Headphones/Earphones	Headphones/Earphones	
and Microphone Requirements	Microphone	Microphone	
ý	Headphones/earphones are required for all students for all PARCC assessments. Some student accommodations may also require headphones/ earphones (e.g., text to speech).		
	Microphones are required for all students taking the Speaking and Listening Assessment. Some student accommodations may also require microphones (e.g., speech to text, voice controls) for other parts of the PARCC assessments.		



Tablet Specifications

Tablets				
Operating System	Minimum Specifications	Recommended Specifications		
Android	Android 4.0 (with 512 MB RAM or greater)	Android 4.0 or newer (with IGB RAM or greater)		
Apple iOS	iPad 2 running iOS 6 (with 512 MB RAM or greater)	iPad 2 or newer running iOS6 or newer (with 512 MB RAM or greater)		
Windows	⁶ Windows 8 (with 512 MB RAM or greater)	⁶ Windows 8 or newer (with IGB RAM or greater)		
Memory	By operating system	By operating system		
Connectivity	Computers must be able to connect to the Internet via wired or wireless networks.	Computers must be able to connect to the Internet via wired or wireless networks.		
Screen Size	9.5 inch screen size or larger ⁷	9.5 inch screen size or larger ⁷		
Screen Resolution	1024 x 768 resolution ⁵ or better	1024 x 768 resolution ⁵ or better		
Input Device Requirements	Keyboard Touchscreen or Mouse	Keyboard Touchscreen or Mouse		
	Due to the onscreen space occupied by a tablet's virtual keyboard, PARCC assessments will require external keyboards for test takers using tablets so as not to limit or obscure the view of test item content and related functionalities when text input is required. Research studies to be conducted by PARCC in Spring 2013 are intended to yield data on students' use of virtual versus external keyboards. PARCC will refine this guidance as needed based on these results. External keyboards must allow students to enter letters, numbers, and symbols and shift, tab, return, delete, and backspace. Tablet touchscreen interfaces can be used for student interactions with the assessments other than text input, including to select/deselect, drag, and highlight text, objects, and areas. To meet security guidelines, each Bluetooth/wireless keyboard must be configured to pair with only a single computer during assessment administration. Other assistive technologies may be needed for students requiring accommodations. PARCC will release Accessibility Guidelines and Accommodations Guidelines in June 2013.			
Headphone/Earphone and Microphone Requirements	Headphones/Earphones Microphone	Headphones/Earphones Microphone		



Security Requirements

Eligible devices of any type **must** have the administrative tools and capabilities to "lock down" the device to temporarily disable features, functionalities, and applications that could present a security risk during test administration. Examples include:

Unrestricted Internet Access	Cameras (still & video)
Screen capture	• Email
Instant messages/chat	Bluetooth connections
Application switching	• Printing



Additional Information

http://www.parcconline.org/technology





Questions



Contact Information

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Holly Glover, Research & Technology holly.glover@arkansas.gov

